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Tonja R. Sutton

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The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

LEE, JAEYUN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,567	Applicant(s) SUTTON ET AL.	
	Examiner Lynn C. Duncan	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 & 6-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 4 and 5 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of Fig. 2 (claims 2-3), Fig. 3 (claim 4) and Fig. 4 (claim 5), respectively. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

2. During a telephone conversation with Robert Christy on March 11, 2008 a provisional election was made with traverse to prosecute the invention of Fig. 2, claims 2-3. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4 & 5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1791

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 & 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by BETSO et al (US 5,576,374).

Regarding claim 1, BETSO et al disclose a method of making a fiber-reinforced thermoplastic polymer composition (col. 3, lines 21-27), introducing the thermoplastic polymer, introducing a masterbatch comprising an elastomer (linear or substantially linear ethylene/alpha-olefin polymer), and introducing a reinforcing fiber into the molten thermoplastic polymer (col. 6, lines 12-14), plasticating the thermoplastic polymer and the masterbatch before the reinforcing-fiber material is introduced (these can be dry blended before entering the extruder col. 9, line 31-36 therefore would be plasticated before the reinforcing-fiber material is introduced) in the extruder forming a molten thermoplastic polymer composition (“melt mixing” col. 9, lines 31-34), extruding a

Art Unit: 1791

molten-fiber-reinforced thermoplastic polymer composition, and forming a fabricated article comprising the fiber-reinforced thermoplastic polymer composition (col. 9, lines 38-52).

Regarding claim 6, BETSO et al disclose extruding the molten fiber-reinforced thermoplastic polymer composition through an extrusion die having a desired shape (col. 9 lines 31-36) and fabricating articles via profile extrusion (col. 9 lines 38-40 & 49). Therefore, extruding through a profile extrusion die having a desired shape is inherent to profile extrusion.

Regarding claim 9, BETSO et al disclose wherein the elastomer is a linear ethylene polymer comprising ethylene and a C₃ to C₂₀ alpha-olefin (col. 5, lines 1-5).

Regarding claim 10, BETSO et al disclose wherein the elastomer is a linear ethylene polymer comprising ethylene and an alpha-olefin selected from the group consisting of propene (propene is the IUPAC name for propylene), butene, hexene or 1-octene (col. 5, lines 10-15).

Regarding claim 11, BETSO et al disclose wherein the elastomer is a linear polyethylene polymer comprising ethylene and 1-octene (col. 5, lines 10-15. An ethylene polymer is inherently a polyethylene).

Regarding claim 12, BETSO et al disclose wherein the masterbatch further comprises talc, clay, calcium carbonate ((col. 2, line 66-col. 6 line 1), colorants, an antioxidant or an antistat (col. 6, lines 30-33).

Regarding claim 13, BETSO et al disclose wherein the reinforcing fiber material is continuous or discontinuous (as there is no other option, BETSO et al disclose

Art Unit: 1791

continuous or discontinuous when they specify a fiber material) is glass fibers and synthetic fibers (col. 6, lines 12-14).

3. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by BETSO et al (US 5,576,374) as evidenced by KALE et al (US 5,773,155).

Regarding claim 8, BETSO et al disclose a method wherein the elastomer is a polyolefin elastomer (substantially linear ethylene/alpha olefin polymer (BETSO et al col. 3, lines 25-26 as evidenced by KALE et al (the substantially linear ethylene polymers are elastomers (KALE et al col. 15, lines 21-28))).

4. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by BETSO et al (US 5,576,374) as evidenced by ROYS et al (WO 99/64241).

Regarding claim 16, BETSO et al disclose the method wherein the fabricated article is a vehicle body cover ("automotive facia" col. 1, lines 59-61 as evidenced by ROYS et al (ROYS et al disclose an automotive part, such as facia (Abstract, line 14) being a car body panel that gets painted (page 1, lines 16-17))).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 2-3, 7, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over BETSO et al (US 5,576,374) as applied to claim 1 above, and in further view of SARGENT (US 5,401,154).

Regarding claim 2, BETSO et al do not disclose (i) extruding the molten fiber-reinforced thermoplastic polymer composition through a die forming a continuous extrusion having a desired cross section, (ii) conveying the continuous extrusion to a cutter, (iii) cutting the continuous extrusion into a plurality of performs, and (iv) conveying the performs away from said cutter into a compression mold, vacuum forming mold or a thermoforming mold.

However, SARGENT teaches (i) extruding the molten fiber-reinforced thermoplastic polymer composition through a die forming a continuous extrusion having a desired cross section (col. 2 lines 30-34), (ii) conveying the continuous extrusion to a cutter, (iii) cutting the continuous extrusion into a plurality of performs (col. 2, lines 45-50), and (iv) conveying the performs away from said cutter into a compression mold (col. 2, lines 54-59).

Regarding claim 3, BETSO et al do not disclose wherein the mold is a compression mold.

However, SARGENT teaches wherein the mold is a compression mold (col. 2, lines 54-59).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to include extruding the molten fiber-reinforced thermoplastic polymer composition through an extrusion die forming a continuous extrusion having a desired cross section, conveying the continuous extrusion to a cutter, cutting the continuous extrusion into a plurality of performs, and conveying the performs away from said cutter into a compression mold of SARGENT in the method of BETSO et al to improve cost competitiveness since it eliminates the extra step of reheating a reinforced thermoplastic perform prior to the molding step (SARGENT col. 2, lines 60-63).

Regarding claim 7, BETSO et al disclose an extruder but do not disclose wherein the extruder is a single screw extruder or a twin-screw extruder.

However, SARGENT teaches wherein the extruder is a twin-screw extruder (col. 5, lines 57-58).

Regarding claim 14, BETSO et al do not disclose wherein the reinforcing fiber material is continuous.

However, SARGENT teaches wherein the reinforcing fiber material having random fiber lengths from 1/32" to continuous can be used (col. 6, lines 2-4).

Regarding claim 15, BETSO et al do not disclose wherein the reinforcing fiber material is a plurality of continuous glass fibers.

However, SARGENT teaches wherein the reinforcing fiber material is a plurality of continuous glass fibers (col. 3, lines 45-46).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to specify the twin screw extruder and the reinforcing fiber being a plurality of continuous glass fibers of SARGENT in the method of BETSO et al to achieve a homogeneous, molten mass of thermoplastic material having fibers randomly dispersed within (SARGENT col. 6, lines 9-11) as each screw results in a different fiber distribution (SARGENT col. 5, lines 64-65).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over BETSO et al (US 5,576,374) as applied to claim 1 above, and in further view of HARA et al (US 5,424,020).

Regarding claim 17, BETSO et al disclose thermoplastic olefins (TPO's) are characterized by a balance of stiffness and low temperature impact, good chemical resistance and broad use temperatures (col. 1, lines 50 & 56-61) and applications including automotive facia (col. 1, lines 59-61).

BETSO et al does not disclose the method wherein the fabricated article is a golf cart underbody.

However, HARA et al disclose the method wherein the fabricated article is an automobile part such as an exterior panel or structural panel (col. 1, lines 13-18).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to recognize an underbody as being a structural part of an automobile (as for

Art Unit: 1791

example, the muffler is hung from the underbody) and would also recognize a golf cart as being a vehicle similar to an automobile but not needing as extensive structural integrity because it is driven at very low speeds and not on heavily trafficked roads. The properties disclosed by BETSO et al would be useful properties of a golf cart underbody: balance of stiffness and low temperature impact (stiffness for structural integrity and low temperature impact for cold weather days), good chemical resistance (wheels kicking up grass fertilizer), broad use temperatures (golfing in Scotland as well as the Carribbean).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynn C. Duncan whose telephone number is (571) 270-5115. The examiner can normally be reached on Monday to Friday 8am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LD

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791